

CLAIMS

1. A rescue device that marks a location, comprising  
a deflated kite-type balloon having a self-sealing inflation port,  
an inflator valve in communication with the self-sealing inflation  
port of the deflated balloon, and  
a container which holds a pressurized, lighter than air gas, said  
container having an outlet port in communication with the inflator  
valve, said inflator valve upon being opened causing the lighter than  
air gas to enter the deflated balloon to inflate the balloon.
2. The rescue device of Claim 1 where balloon comprises a central  
hollow body with opposed sides, said hollow body being filled with the  
gas upon inflation of the balloon, and a pair of sail elements, one sail  
element attached to one opposed side and the other element attached  
to the other opposed side.
3. The rescue device of Claim 1 where balloon has a substantially  
triangular configuration.
4. The rescue device of Claim 1 where balloon includes a tail.
5. The rescue device of Claim 1 where the hollow body has a central  
longitudinal axis and the balloon is substantially symmetrical about  
said axis.
6. The rescue device of Claim 1 where balloon comprises  
a hollow body with a head end, a tail end, and opposed  
outwardly extending arms, said hollow body being filled with the gas

1 upon inflation of the balloon, and

2 a pair of sail elements connected to the hollow body, one sail  
3 element extending between one arm and the tail end and the other sail  
4 element extending between the other arm and the tail end.

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6 7. The rescue device of Claim 6 where the hollow body has a central  
7 longitudinal axis extending between the head end and the tail end and  
8 the balloon is substantially symmetrical about said axis.

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10 8. The rescue device of Claim 6 where each arm has an outer end  
11 and a first connector line extends between said outer ends and a  
12 second connector line extends between the head end and an  
13 intermediate portion of the first connector line.

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15 9. The rescue device of Claim 8 including a third line adapted to  
16 secure the balloon at the location, said third line including an end  
17 connected to an intermediate portion of the first connector line.

18  
19 10. The rescue device of Claim 9 where, with the balloon is in a  
20 predetermined compact condition, a portion of the third line extends  
21 outward from the compacted balloon.

22  
23 11. The rescue device of Claim 6 where a tail is attached to the tail  
24 end of the hollow body and the self-sealing inflation port is near said  
25 tail end.

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27  
28 12. The rescue device of Claim 6 where a tail is attached to the tail  
29 end of the hollow body and the self-sealing inflation port is near the

1 head end.

2  
3 13. The rescue device of Claim 6 where the sail elements each have a  
4 substantially triangular configuration.

5  
6 14. The rescue device of Claim 1 including a line adapted to secure  
7 the balloon at the location and a housing with the deflated balloon in  
8 said housing in a predetermined compact condition.

9  
10 15. The rescue device of Claim 14 where  
11 said balloon has opposed faces, opposed lateral sides, opposed  
12 ends, and a longitudinal axis extending between said opposed ends,  
13 said inflation port being nearby one of said ends of the balloon,  
14 each of said lateral sides being rolled inward against one of said  
15 faces and towards the longitudinal axis so that said balloon is a  
16 partially rolled balloon, which is then rolled inward from the end  
17 opposed to the inflation port, towards the inflation port, into said  
18 predetermined compact condition.

19  
20 16. The rescue device of Claim 15 including a detachable cover  
21 member closing an open end of the housing and a valve actuator  
22 connected to the cover member so that, upon removal of the cover  
23 member from the open end of the housing, the valve actuator opens  
24 the inflator valve causing the lighter than air gas to enter the  
25 compacted balloon to inflate the balloon, which exits the open end of  
26 the housing solely under the influence of a pressurized gas.

27  
28 17. The rescue device of Claim 16 where the housing encloses the  
29 container, the inflator valve, and the compacted balloon.

1 18. A rescue device that marks a location, comprising  
2 a housing having an open end,  
3 a deflated kite-type balloon having a self-sealing inflation port,  
4 said balloon being in a predetermined compact condition and  
5 positioned within the housing,  
6 said balloon comprising  
7 a hollow body that is filled with the gas upon inflation  
8 of the balloon,  
9 a sail element attached to the body, and  
10 a tail attached to an end of the balloon,  
11 an inflator valve in communication with the inflation port of the  
12 deflated balloon,  
13 a container which holds a pressurized, lighter than air gas, said  
14 container having an outlet port in communication with the inflator  
15 valve, said inflator valve upon being opened causing the lighter than  
16 air gas to enter the deflated balloon to inflate the balloon.

17  
18 19. The rescue device of Claim 18 including a secured line that  
19 secures the inflated balloon to the device.

20  
21 20. A rescue device that marks a location, comprising  
22 a housing having an open end,  
23 a deflated kite-type balloon in the housing and having a self-  
24 sealing inflation port,  
25 said balloon comprising  
26 a hollow body with a head end, a tail end, and  
27 opposed outwardly extending arms each having an outer  
28 end, said hollow body being filled with the gas upon  
29 inflation of the balloon,

1                   a pair of sail elements connected to the hollow body,  
2                   one sail element extending between one arm and the tail  
3                   end and the other sail element extending between the other  
4                   arm and the tail end, and  
5                   an elongated tail connected to the tail end,  
6                   an inflator valve in communication with the inflation port of the  
7                   deflated balloon,  
8                   a container which holds a pressurized, lighter than air gas, said  
9                   container having an outlet port in communication with the inflator  
10                  valve, said inflator valve upon being opened causing the lighter than  
11                  air gas to enter the deflated balloon to inflate the balloon,  
12                  a secured line that secures the inflated balloon to the device, and  
13                  a first connector line that extends between the outer ends of the  
14                  arms,  
15                  said secured line including an end connected to an intermediate  
16                  portion of the first connector line.

17  
18   21.   The rescue device of Claim 20 including a second connector line  
19   that extends between the head end and an intermediate portion of the  
20   first connector line.

21  
22   22.   The rescue device of Claim 20 where the hollow body has a  
23   central longitudinal axis extending between the head end and the tail  
24   end and the balloon is substantially symmetrical about said axis.

25  
26   23.   The rescue device of Claim 22 where balloon has a substantially  
27   triangular configuration.

1 24. The rescue device of Claim 20 where the deflated balloon is in a  
2 predetermined compacted condition to fit within the housing.

3  
4 25. The rescue device of Claim 24 where said compacted balloon  
5 includes

6 a longitudinal axis extending between the head end and tail end  
7 and has opposed faces, opposed lateral sides and the inflation port is  
8 nearby one of said ends,

9 said tail is folded inward lengthwise towards said head end  
10 substantially along the longitudinal axis and each of said lateral sides is  
11 rolled inward against one of said faces and towards the longitudinal  
12 axis so that said balloon is a partially rolled balloon, which is then  
13 rolled inward from the end opposite the inflation port towards said one  
14 end including the inflation port, into said predetermined compact  
15 condition,

16 a portion of the secured line that extends from the end connected  
17 to the intermediate portion of the first connector line is positioned to  
18 lie substantially along or nearby the longitudinal axis and to extend  
19 outward from the compacted balloon from said one end including the  
20 inflation port.

21  
22 26. The rescue device of Claim 25 where the tail has a length that  
23 when folded inward does not intersect with the connector line.

24  
25 27. The rescue device of Claim 20 including a detachable cover  
26 member closing the open end of the housing and a valve actuator  
27 connected to the cover member so that, upon removal of the cover  
28 member from the housing, the valve actuator opens the inflator valve  
29 causing the lighter than air gas to enter the compacted balloon to

1 inflate the balloon, which exits the open end of the housing solely  
2 under the influence of a pressurized gas.

3  
4 28. The rescue device of Claim 27 where the housing encloses the  
5 container, the inflator valve, and the compacted balloon.

6  
7 29. A rescue device that marks a location, comprising  
8 a housing having an open end,  
9 a deflated kite-type balloon having a self-sealing inflation port,  
10 said balloon positioned within said housing,  
11 said balloon comprising  
12 a hollow inflatable body having a substantially cross  
13 configuration with a pair of opposed arms intersecting a  
14 beam element, said arms having outer ends, and  
15 a pair of sail elements, each sail element connected to  
16 one arm and to a side of the beam element, and  
17 an elongated tail connected to the tail end,  
18 an inflator valve in communication with the inflation port of the  
19 deflated balloon,  
20 a container which holds a pressurized, lighter than air gas, said  
21 container having an outlet port in communication with the inflator  
22 valve, said inflator valve upon being opened causing the lighter than  
23 air gas to enter the deflated balloon to inflate the balloon,  
24 a secured line that secures the inflated balloon to the device, and  
25 a connector line that extends between outer ends of the arms,  
26 said secured line including an end connected to an intermediate  
27 portion of the connector line.

1 30. A kite-type balloon comprising  
2 a hollow body adapted to be filled with the gas upon inflation of  
3 the balloon, and  
4 a sail element connected to the hollow body.  
5

6 31. The kite-type balloon of Claim 30 where said balloon has a  
7 substantially triangular configuration.  
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9 32. The kite-type balloon of Claim 30 where balloon includes a tail.  
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11 33. The kite-type balloon of Claim 30 where at least a portion of the  
12 balloon is radar reflective.  
13

14 34. The kite-type balloon of Claim 30 where body has opposed lateral  
15 sides and a sail element is attached to each lateral side.  
16

17 35. The kite-type balloon of Claim 34 where the hollow body has a  
18 central longitudinal axis and the balloon is substantially symmetrical  
19 about said axis.  
20

21 36. A kite-type balloon comprising  
22 a hollow body with a head end, a tail end, and opposed  
23 outwardly extending arms, said hollow body adapted to be filled with  
24 the gas upon inflation of the balloon, and  
25 a pair of sail elements connected to the hollow body, one sail  
26 element extending between one arm and the tail end and the other sail  
27 element extending between the other arm and the tail end.  
28  
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1 37. The kite-type balloon of Claim 36 including a tail attached to the  
2 tail end of the hollow body and the hollow body has a central  
3 longitudinal axis extending between the head end and the tail end and  
4 the balloon is substantially symmetrical about said axis.

5  
6 38. The kite-type balloon of Claim 36 where at least a portion of the  
7 balloon is radar reflective.

8  
9 39. The kite-type balloon of Claim 36 where said balloon has a  
10 substantially triangular configuration.

11  
12 40. The kite-type balloon of Claim 36 where the sail elements each  
13 have a substantially triangular configuration.

14  
15 41. A kite-type balloon comprising  
16 a hollow inflatable body having a substantially cross  
17 configuration including a pair of opposed arms intersecting a beam  
18 element, and  
19 a pair of sail elements, each sail element connected to one arm  
20 and to a side of the beam element.

21  
22 42. The kite-type balloon of Claim 41 where each sail element has a  
23 substantially triangular configuration.

24  
25 43. The kite-type balloon of Claim 41 where the beam element has a  
26 longitudinal axis and the balloon is substantially symmetrical about  
27 said axis.

1 44. The kite-type balloon of Claim 41 including a tail attached to an  
2 end of the inflatable body and where each arm has an outer end and  
3 the beam element has a head end and a tail end, and each sail element  
4 has an outer edge tapering inward to terminate at or near the tail end.  
5

6 45. The kite-type balloon of Claim 44 including  
7 a first connector line that extends between the opposed outer  
8 ends of the arms, and  
9 a second connector line that extends between the head end and  
10 an intermediate portion of the first connector line.  
11

12 46. A method of marking an individual's location to facilitate rescue  
13 even under windy weather conditions, comprising  
14 providing

- 15 (a) a source of lighter than air gas,
- 16 (b) a deflated kite-type balloon having a self-sealing  
17 inflation port adapted to be placed in communication with  
18 the source of lighter than air gas to inflate the kite-type  
19 balloon, and
- 20 (c) a line adapted to secure the balloon at the location, and

21 when rescue is desired, inflating the deflated kite-type balloon  
22 with said gas from said source and releasing the inflated kite-type  
23 balloon with the line secured to the balloon and at or near said  
24 location.  
25

26 47. The method of Claim 46 where at least a portion of the kite-type  
27 balloon is radar reflective.  
28  
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1 48. The method of Claim 46 where the kite-type balloon comprises  
2 a hollow body adapted to be filled with the gas upon inflation of  
3 the balloon, and  
4 a sail element connected to the hollow body.  
5

6 49. The method of Claim 46 where the kite-type balloon comprises  
7 a hollow body with a head end, a tail end, and opposed  
8 outwardly extending arms, said hollow body adapted to be filled with  
9 the gas upon inflation of the balloon, and  
10 a pair of sail elements connected to the hollow body, one sail  
11 element extending between one arm and the tail end and the other sail  
12 element extending between the other arm and the tail end.  
13

14 50. The method of Claim 46 where the kite-type balloon comprises  
15 a hollow inflatable body having a substantially cross  
16 configuration including a pair of opposed arms intersecting a beam  
17 element, and  
18 a pair of sail elements, each sail element connected to one arm  
19 and to a side of the beam element.  
20